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## Prevention

### MICROVASCULAR CORONARY DYSFUNCTION, LEFT VENTRICULAR VOLUMES AND MASS: RESULTS FROM THE WOMEN'S ISCHEMIA SYNDROME EVALUATION-CORONARY VASCULAR DYSFUNCTION STUDY

Poster Contributions

Poster Sessions, Expo North

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**Background:** Women with signs and symptoms of ischemia and no obstructive coronary artery disease (CAD) often have microvascular coronary dysfunction (MCD). This has been associated with adverse outcomes including hospitalization for heart failure with preserved ejection fraction (EF). We sought to explore how MCD relates to diastolic dysfunction.

**Methods:** Women (n=53) with signs and symptoms of ischemia but no obstructive CAD and normal EF underwent coronary reactivity testing (CRT) and cardiac magnetic resonance imaging (1.5T) concurrently within 30 days. CASS MRV software (Pie Medical®) was used to calculate left ventricular (LV) volumes and diastolic filling curves. CRT using acetylcholine, adenosine and nitroglycerin was performed as previously published.

**Results:** Women were 55±10 years with body mass index 30±8, hypertension (33%), dyslipidemia (17%), smokers (7%), family CAD (57%) and diabetes (13%). Pearson correlations between coronary blood flow changes and LV variables with p-values are shown (Table). We found that shorter time to peak filling, smaller end-systolic volume, lower LV mass and higher EF are associated with better coronary blood flow.

**Conclusion:** Among women with signs and symptoms of ischemia but no obstructive CAD and preserved EF, coronary blood flow change is related to diastolic parameters including time to peak filling, end-systolic volume, and EF. Further work is needed to understand relations between diastolic function and MCD.

Left Ventricular Variables	Coronary Blood Flow Change; Pearson r ( p-value)		
	Acetylcholine	Adenosine	Nitroglycerin
Time to peak filling rate	-0.32 (0.02)	0.07 (0.64)	-0.06 (0.69)
End-diastolic volume index	-0.12 (0.38)	-0.18 (0.20)	-0.18 (0.21)
End-systolic volume index	-0.26 (0.06)	-0.33 (0.017)	-0.32 (0.019)
Mass	-0.17 (0.22)	-0.25 (0.07)	-0.27 (0.052)
Ejection Fraction	0.26 (0.059)	0.32 (0.022)	0.29 (0.035)